FIG. 1

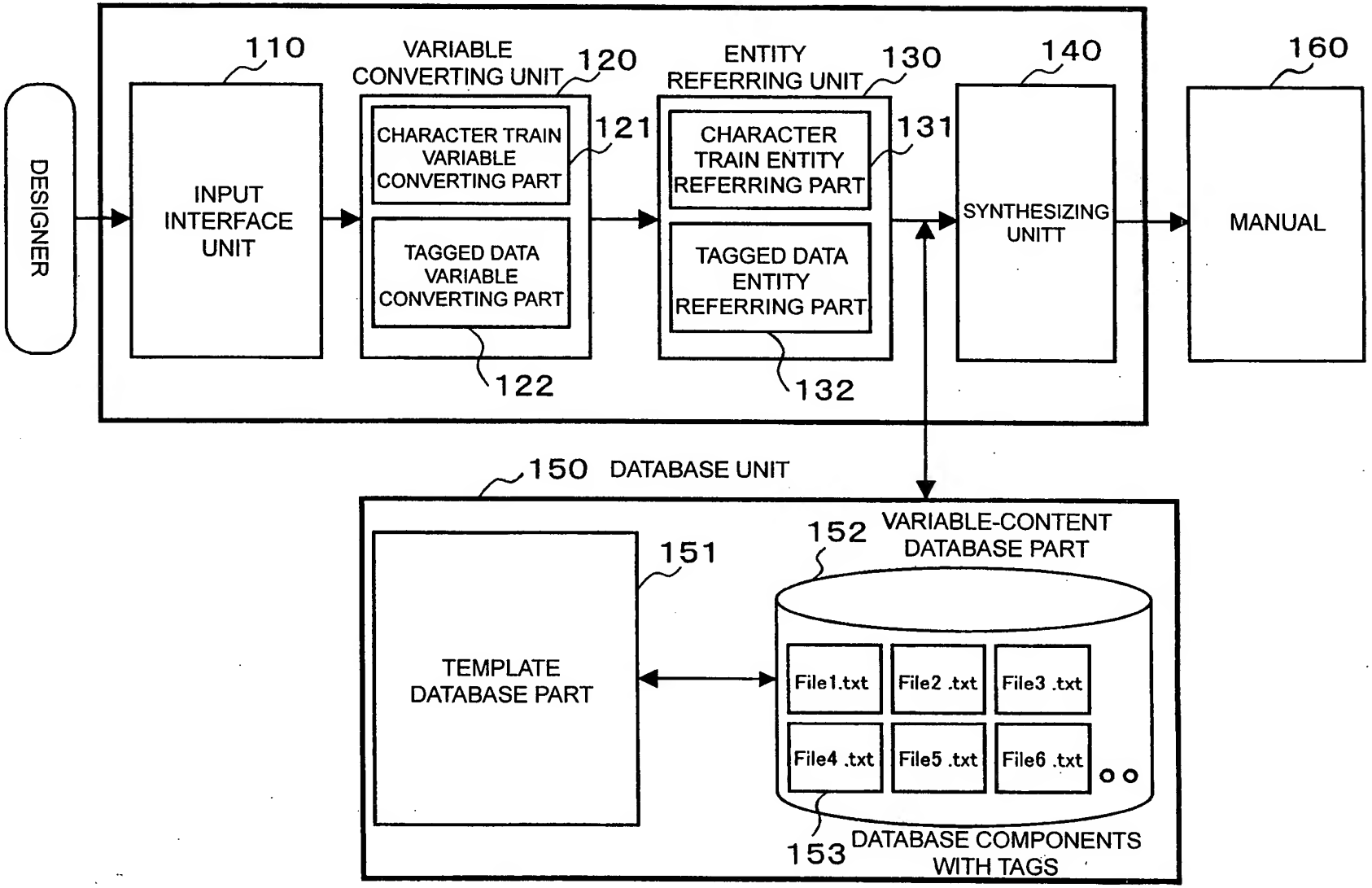

DESIGNER
110
INPUT INTERFACE UNIT
VARIABLE CONVERTING UNIT
120
CHARACTER TRAIN VARIABLE CONVERTING PART
121
TAGGED DATA VARIABLE CONVERTING PART
122
ENTITY REFERRING UNIT
130
CHARACTER TRAIN ENTITY REFERRING PART
131
TAGGED DATA ENTITY REFERRING PART
132
140
SYNTHESIZING UNITT
160
MANUAL
150 DATABASE UNIT
151
TEMPLATE DATABASE PART
152
VARIABLE-CONTENT DATABASE PART
File1.txt
File2 .txt
File3 .txt
File4 .txt
File5 .txt
File6 .txt
oo
153
DATABASE COMPONENTS WITH TAGS

FIG. 2

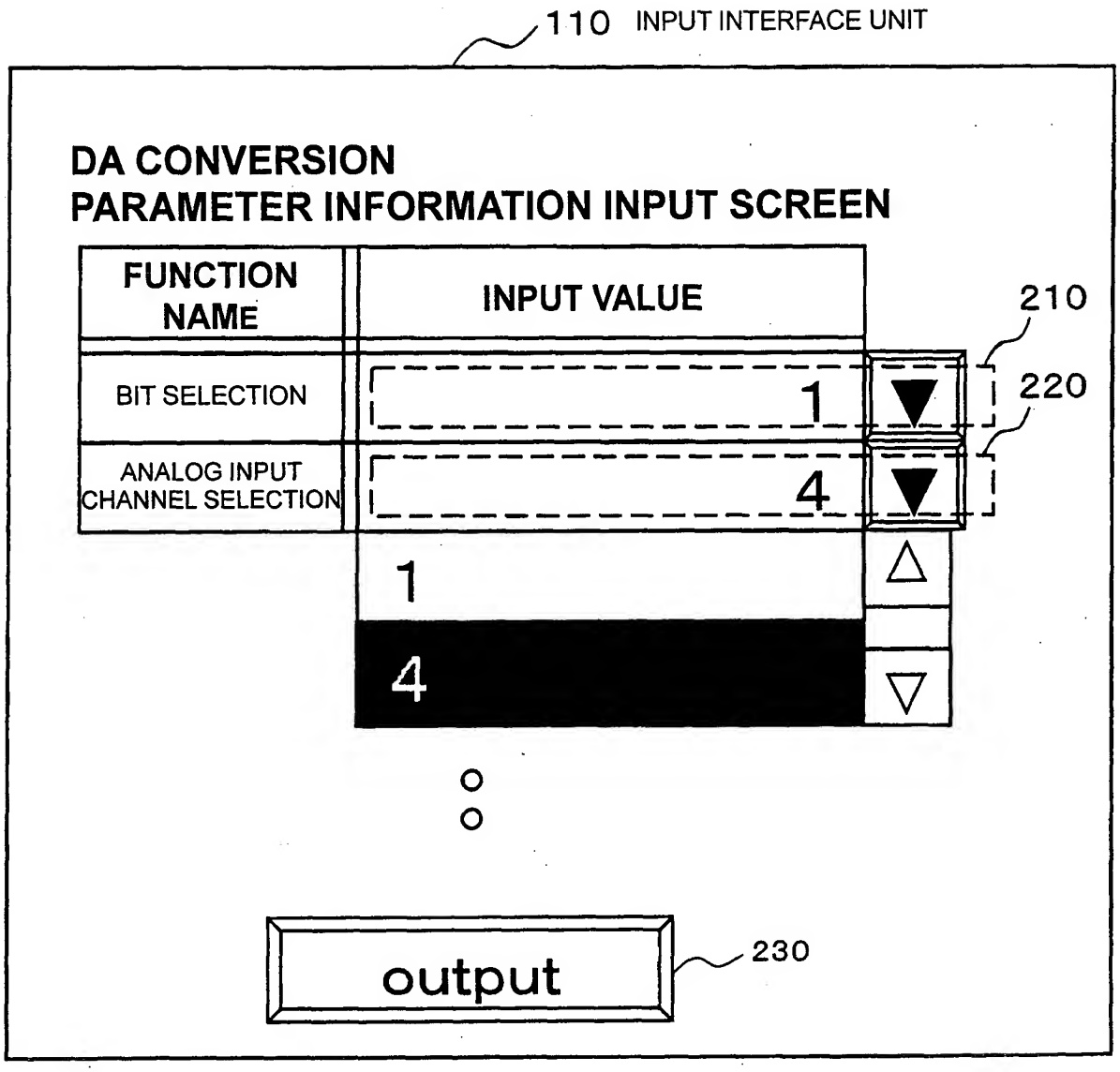

110 INPUT INTERFACE UNIT
DA CONVERSION
PARAMETER INFORMATION INPUT SCREEN
FUNCTION NAME
INPUT VALUE
210
220
BIT SELECTION
1
ANALOG INPUT CHANNEL SELECTION
4
1
4
output
230

FIG. 3

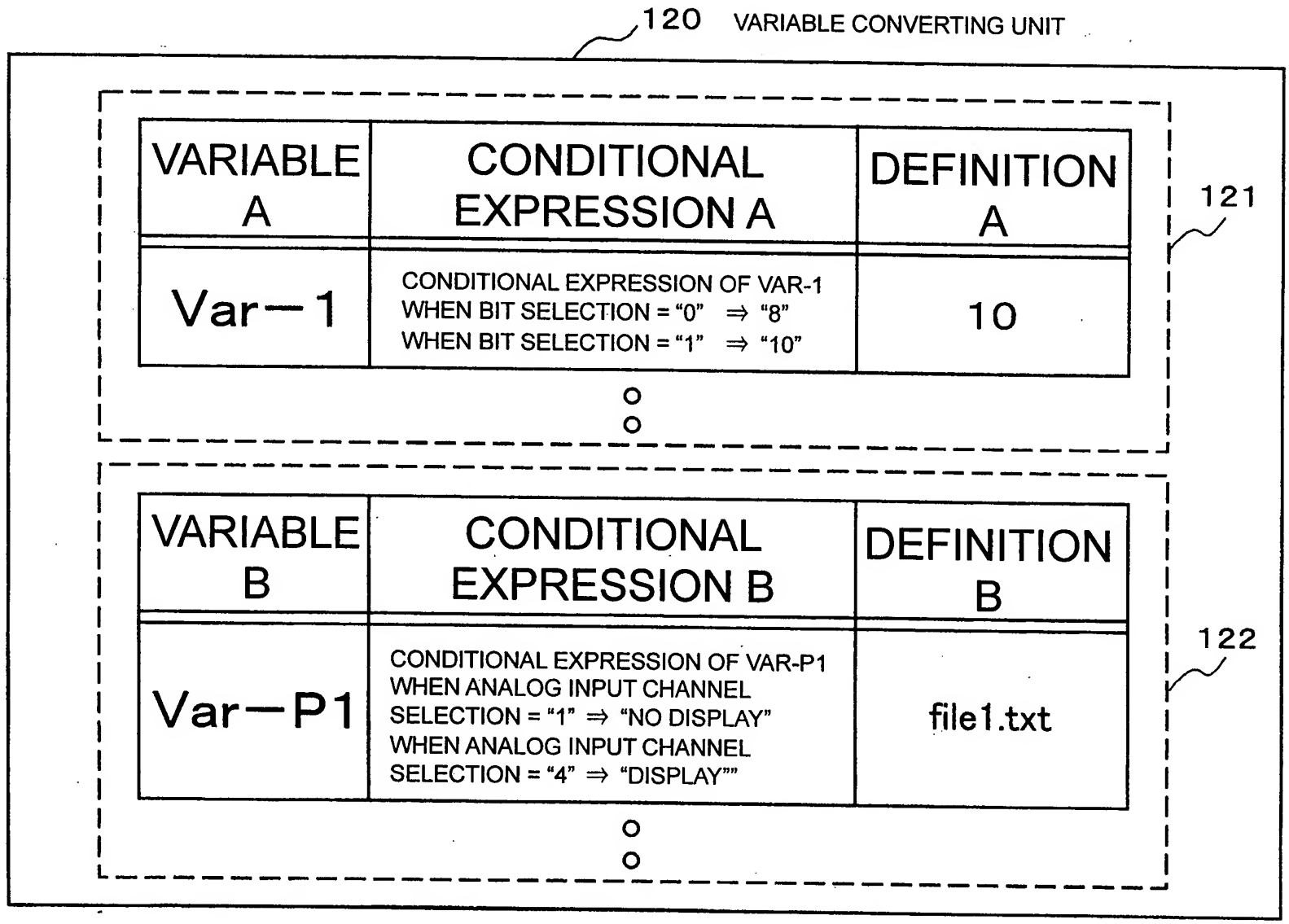

120 VARIABLE CONVERTING UNIT
VARIABLE A
CONDITIONAL EXPRESSION A
DEFINITION A
Var−1
CONDITIONAL EXPRESSION OF VAR-1
WHEN BIT SELECTION = "0" ⇒ "8"
WHEN BIT SELECTION = "1" ⇒ "10"
10
121
VARIABLE B
CONDITIONAL EXPRESSION B
DEFINITION B
Var−P1
CONDITIONAL EXPRESSION OF VAR-P1
WHEN ANALOG INPUT CHANNEL
SELECTION = "1" ⇒ "NO DISPLAY"
WHEN ANALOG INPUT CHANNEL
SELECTION = "4" ⇒ "DISPLAY""
file1.txt
122

FIG. 4

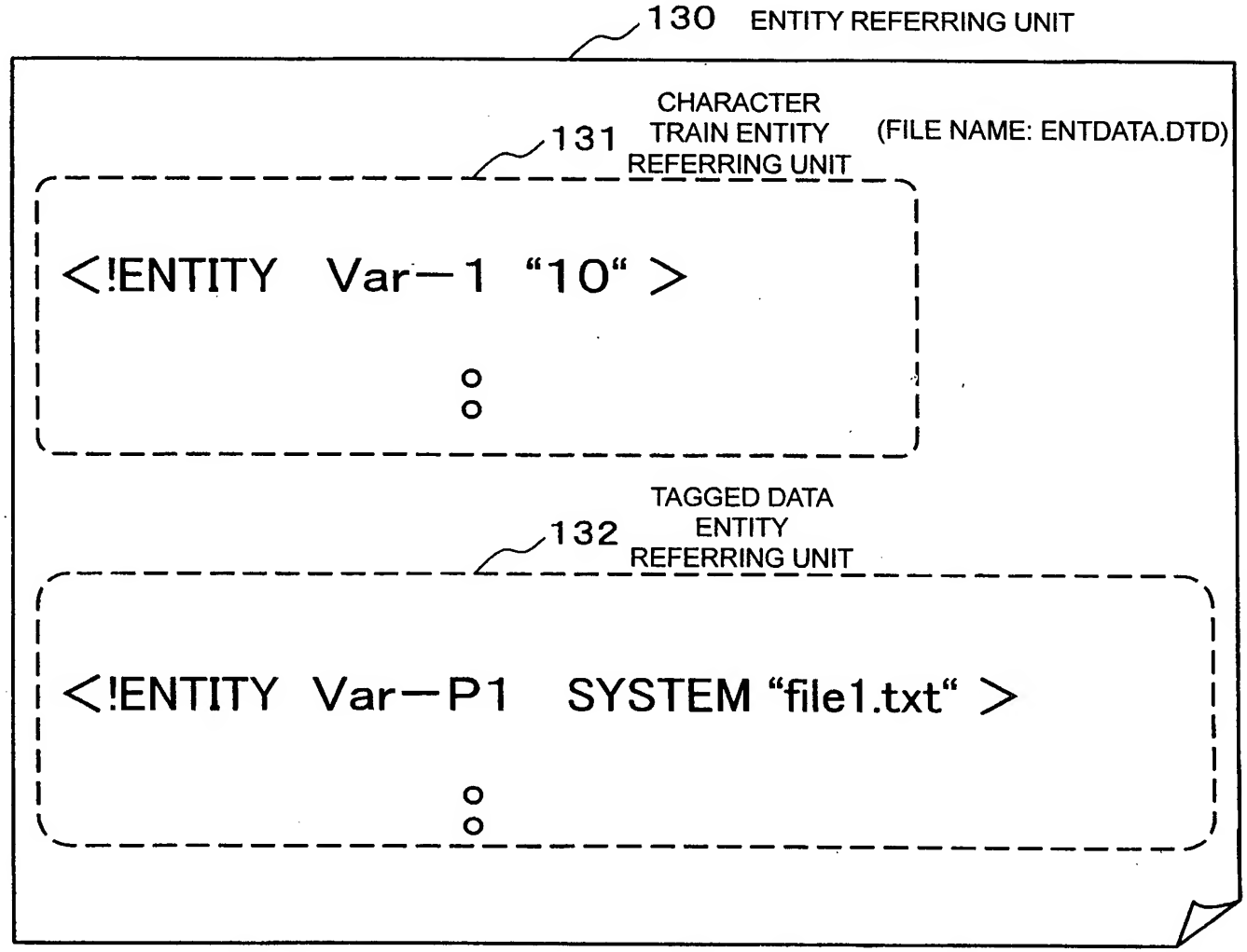

130 ENTITY REFERRING UNIT
CHARACTER TRAIN ENTITY REFERRING UNIT
131
(FILE NAME: ENTDATA.DTD)
<!ENTITY Var−1 "10" >
TAGGED DATA ENTITY REFERRING UNIT
132
<!ENTITY Var−P1 SYSTEM "file1.txt" >

FIG. 5

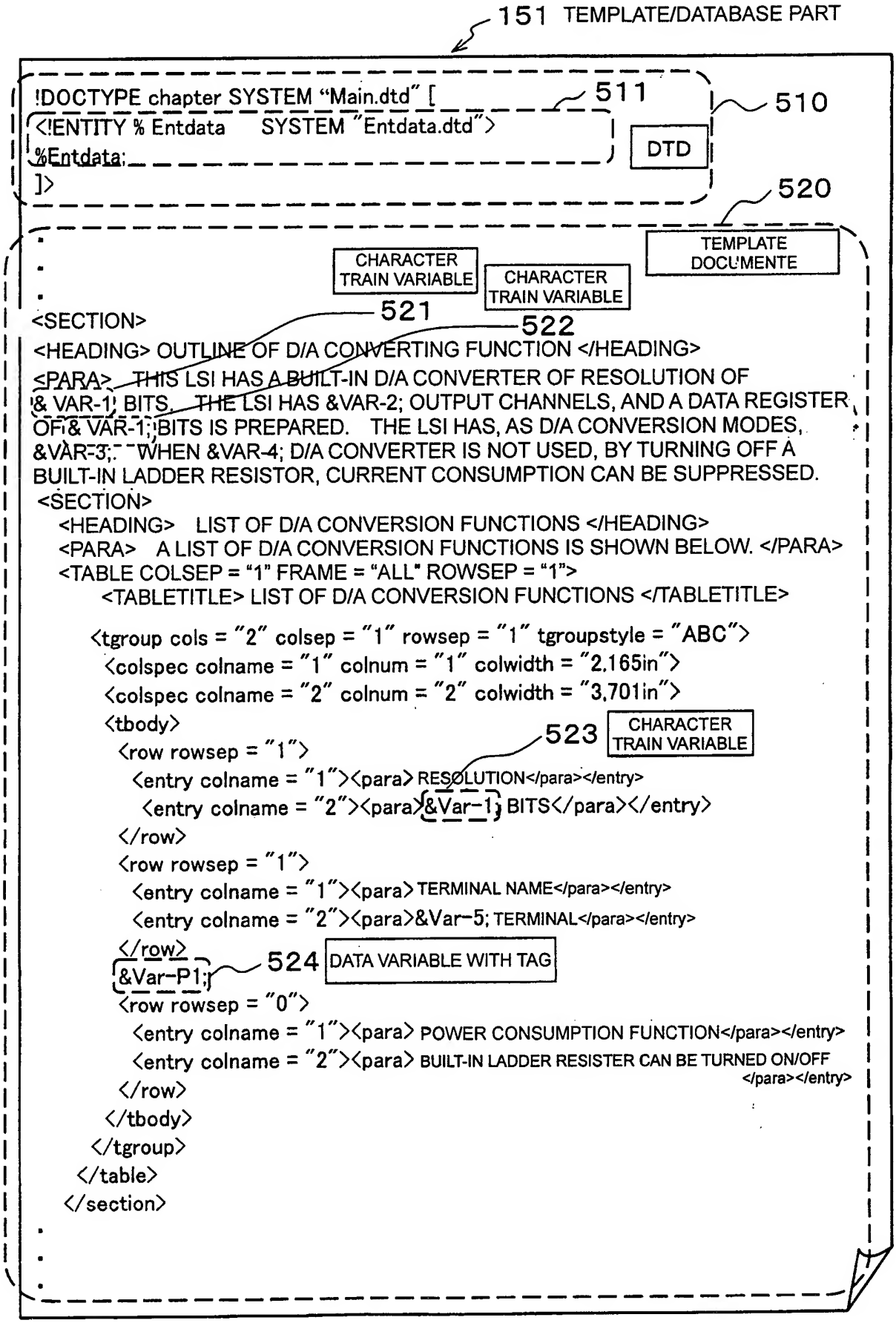

151 TEMPLATE/DATABASE PART
!DOCTYPE chapter SYSTEM "Main.dtd" [
<!ENTITY % Entdata SYSTEM "Entdata.dtd">
%Entdata;
]>
511
510
DTD
520
TEMPLATE DOCUMENTE
CHARACTER TRAIN VARIABLE
CHARACTER TRAIN VARIABLE
521
522
<SECTION>
<HEADING> OUTLINE OF D/A CONVERTING FUNCTION </HEADING>
<PARA> THIS LSI HAS A BUILT-IN D/A CONVERTER OF RESOLUTION OF &VAR-1; BITS. THE LSI HAS &VAR-2; OUTPUT CHANNELS, AND A DATA REGISTER OF &VAR-1; BITS IS PREPARED. THE LSI HAS, AS D/A CONVERSION MODES, &VAR-3; WHEN &VAR-4; D/A CONVERTER IS NOT USED, BY TURNING OFF A BUILT-IN LADDER RESISTOR, CURRENT CONSUMPTION CAN BE SUPPRESSED.
<SECTION>
<HEADING> LIST OF D/A CONVERSION FUNCTIONS </HEADING>
<PARA> A LIST OF D/A CONVERSION FUNCTIONS IS SHOWN BELOW. </PARA>
<TABLE COLSEP = "1" FRAME = "ALL" ROWSEP = "1">
<TABLETITLE> LIST OF D/A CONVERSION FUNCTIONS </TABLETITLE>
<tgroup cols = "2" colsep = "1" rowsep = "1" tgroupstyle = "ABC">
<colspec colname = "1" colnum = "1" colwidth = "2.165in">
<colspec colname = "2" colnum = "2" colwidth = "3.701in">
<tbody>
<row rowsep = "1">
523
CHARACTER TRAIN VARIABLE
<entry colname = "1"><para> RESOLUTION</para></entry>
<entry colname = "2"><para>&Var-1; BITS</para></entry>
</row>
<row rowsep = "1">
<entry colname = "1"><para> TERMINAL NAME</para></entry>
<entry colname = "2"><para>&Var-5; TERMINAL</para></entry>
</row>
&Var-P1;
524
DATA VARIABLE WITH TAG
<row rowsep = "0">
<entry colname = "1"><para> POWER CONSUMPTION FUNCTION</para></entry>
<entry colname = "2"><para> BUILT-IN LADDER RESISTER CAN BE TURNED ON/OFF</para></entry>
</row>
</tbody>
</tgroup>
</table>
</section>

FIG. 6

153 DATABASE COMPONENT WITH TAG

(FILE NAME: FILE1.TXT) FILE CORRESPONDING TO VAR-P1

```
<row rowsep = "1">
  <entry colname = "1"><para> D/A CONVERSION CHANNEL MONITOR</para></entry>
  <entry colname = "2"><para> CHANNEL 0 TO CHANNEL 3</para>
  </entry>
</row>
<row rowsep = "1">
  <entry colname = "1"><para> SCAN CLOCK SELECTION</para></entry>
  <entry colname = "2"><para> fs/16, fs/32, fs/64, fs/128</para></entry>
</row>
<row rowsep = "1">
  <entry colname = "1"><para> D/A CONVERSION MODE SELECTION</para></entry>
  <entry colname = "2"><para> FIXED CONVERSION MODE, 2-CHANEL CONVERSION, 4-CHANNEL
                              CONVERSION</para></entry>
</row>
```

FIG. 7

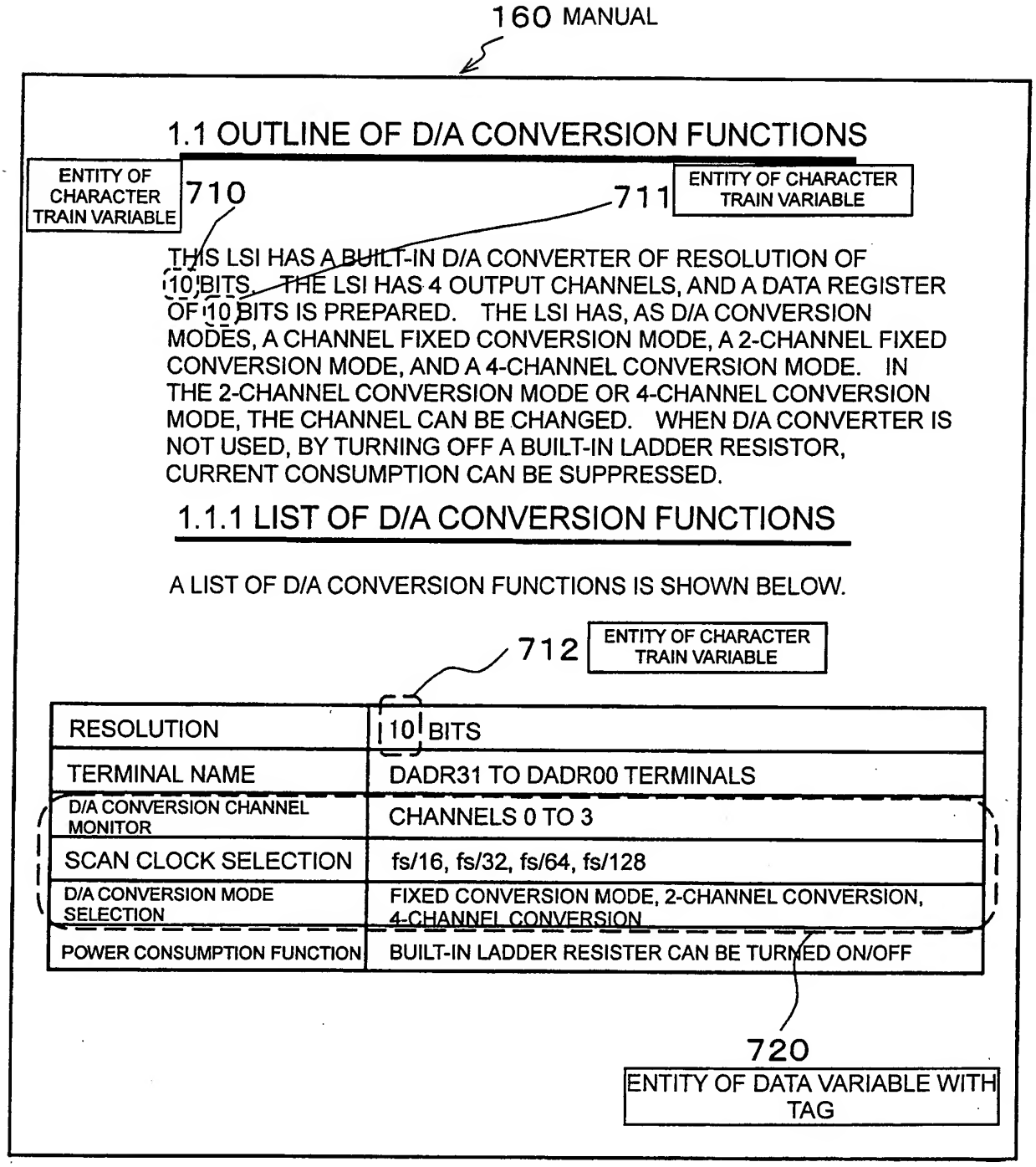
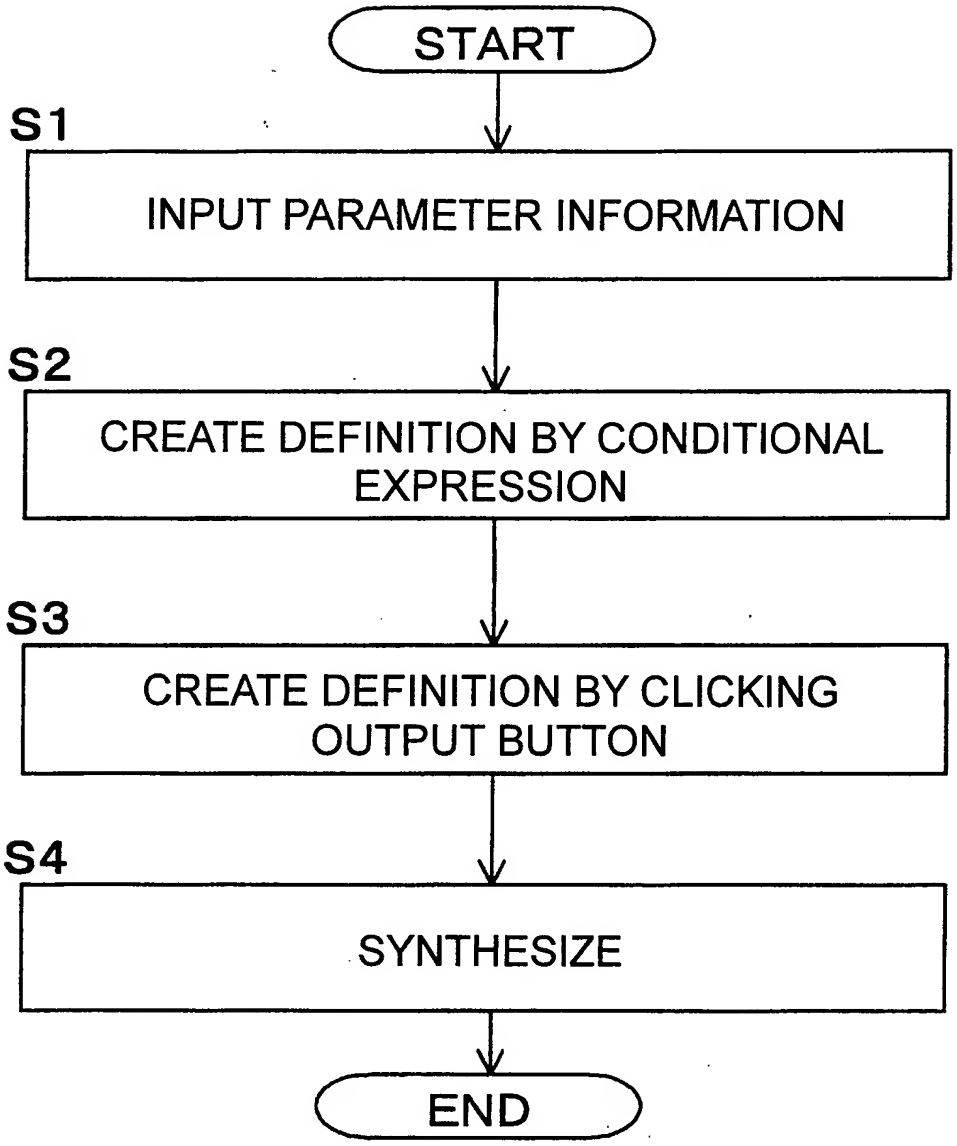

160 MANUAL
1.1 OUTLINE OF D/A CONVERSION FUNCTIONS
ENTITY OF CHARACTER TRAIN VARIABLE
710
711
ENTITY OF CHARACTER TRAIN VARIABLE
THIS LSI HAS A BUILT-IN D/A CONVERTER OF RESOLUTION OF 10 BITS. THE LSI HAS 4 OUTPUT CHANNELS, AND A DATA REGISTER OF 10 BITS IS PREPARED. THE LSI HAS, AS D/A CONVERSION MODES, A CHANNEL FIXED CONVERSION MODE, A 2-CHANNEL FIXED CONVERSION MODE, AND A 4-CHANNEL CONVERSION MODE. IN THE 2-CHANNEL CONVERSION MODE OR 4-CHANNEL CONVERSION MODE, THE CHANNEL CAN BE CHANGED. WHEN D/A CONVERTER IS NOT USED, BY TURNING OFF A BUILT-IN LADDER RESISTOR, CURRENT CONSUMPTION CAN BE SUPPRESSED.
1.1.1 LIST OF D/A CONVERSION FUNCTIONS
A LIST OF D/A CONVERSION FUNCTIONS IS SHOWN BELOW.
712
ENTITY OF CHARACTER TRAIN VARIABLE
RESOLUTION | 10 BITS
TERMINAL NAME | DADR31 TO DADR00 TERMINALS
D/A CONVERSION CHANNEL MONITOR | CHANNELS 0 TO 3
SCAN CLOCK SELECTION | fs/16, fs/32, fs/64, fs/128
D/A CONVERSION MODE SELECTION | FIXED CONVERSION MODE, 2-CHANNEL CONVERSION, 4-CHANNEL CONVERSION
POWER CONSUMPTION FUNCTION | BUILT-IN LADDER RESISTER CAN BE TURNED ON/OFF
720
ENTITY OF DATA VARIABLE WITH TAG

FIG. 8


START
S1
INPUT PARAMETER INFORMATION
S2
CREATE DEFINITION BY CONDITIONAL EXPRESSION
S3
CREATE DEFINITION BY CLICKING OUTPUT BUTTON
S4
SYNTHESIZE
END